REMARKS

This application has been carefully reviewed in light of the Office Action dated November 5, 2008. Claims 1, 3, 7, 9, 13, 15 and 25 to 29 are pending in the application, with Claims 28 and 29 having been newly-added and Claims 4, 6, 10, 12, 16 and 18 having been canceled. Claims 1, 7, 13 and 25 to 27 are independent. Reconsideration and further examination are respectfully requested.

Claims 1, 7 and 13 were objected to as allegedly being duplicates of Claims 4, 10 and 16. Inasmuch as Claims 4, 10 and 16 have been cancelled, the objections are believed to be obviated. Reconsideration and withdrawal of the objections are respectfully requested.

Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18 and 25 to 27 were rejected under 35 U.S.C. § 112, second paragraph. Inasmuch as the terms in question have been cancelled and/or amended in the claims, the rejections are believed to be obviated. Reconsideration and withdrawal of the rejections are respectfully requested.

Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16 and 18 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,643,031 (Takano) in view of U.S. Patent No. 6,356,363 (Cooper) and further in view of U.S. Patent No. 7,064,869 (Spaulding), and Claims 25, 26 and 27 were rejected under § 103(a) over Takano in view of Spaulding and further in view of U.S. Patent No. 6,943,918 (Kakutani). Reconsideration and withdrawal of the rejections are respectfully requested.

The invention concerns error diffusion processing on colorants having different densities. According to the invention, one of two different types of error diffusion processes are executed. A first error diffusion process is executed to a first density

component, and a second error diffusion process is executed to a second density component, where the first and second density components have respective different component types and wherein one droplet output based on the first density component has a lower density/smaller size than one droplet output based on the second density component.

Referring specifically to the claims, Claim 1 is directed to an image processing apparatus for executing an error diffusion process to a plurality of density components, comprising a processor and a memory, a first processing unit that executes the error diffusion process by changing at least one of a quantization threshold value and a quantization diffusion coefficient which are used for the error diffusion process on the basis of information on one of the density components to be processed, a second processing unit that executes the error diffusion process by setting, into fixed values, the quantization threshold value and the quantization diffusion coefficient which are used for the error diffusion process, wherein the error diffusion process by the second processing unit requires a lighter processing load than the error diffusion process by the first processing unit, and an error diffusion processing control unit that controls to execute, by the first processing unit, the error diffusion process to a first density component among the plurality of density components, and by the second processing unit, the error diffusion process to a second density component among the plurality of density components, wherein the first and second density components have respective different component types and wherein one dot output based on the first density component has a lower density than one dot output based on the second density component.

Claims 7 and 13 are method and computer medium claims, respectively, that substantially correspond to Claim 1. Claims 25, 26 and 27 are along the lines of Claims 1, 7 and 13, respectively, with one difference being that one droplet output based on the first density component has a smaller size than one droplet output based on the second density component.

The applied art, alone or in any permissible combination, is not seen to disclose or to suggest the features of Claims 1, 7, 13 and 25 to 27, and in particular, is not seen to disclose or to suggest at least the features of controlling an error diffusion processing to execute, by a first processing unit/step, an error diffusion process to a first density component among a plurality of density components, and by a second processing unit/step which requires a lighter processing load than the first processing unit/step, the error diffusion process to a second density component among the plurality of density components, wherein the first and second density components have respective different component types and wherein one dot (droplet) output based on the first density component has a lower density (smaller size) than one dot (droplet) output based on the second density component.

Takano is seen to disclose switching a threshold according to the density of image signal 4001 (Fig. 27). Takano, however, is not seen to execute processing according to the type of a density component. Takano is not, however, seen to disclose or to suggest at least the features of controlling an error diffusion processing to execute, by a first processing unit/step, an error diffusion process to a first density component among a plurality of density components, and by a second processing unit/step which requires a lighter processing load than the first processing unit/step, the error diffusion process to a

second density component among the plurality of density components, wherein the first and second density components have respective different component types and wherein one dot (droplet) output based on the first density component has a lower density (smaller size) than one dot (droplet) output based on the second density component.

Cooper is not seen to add anything that, when combined with Takano, would have resulted in the invention. In this regard, Cooper is merely seen to disclose generating a separate threshold array for each color plane of an image. Cooper is not, however, seen to disclose or to suggest anything that, when combined with Takano, would have resulted in at least the features of controlling an error diffusion processing to execute, by a first processing unit/step, an error diffusion process to a first density component among a plurality of density components, and by a second processing unit/step which requires a lighter processing load than the first processing unit/step, the error diffusion process to a second density component among the plurality of density components, wherein the first and second density components have respective different component types and wherein one dot (droplet) output based on the first density component has a lower density (smaller size) than one dot (droplet) output based on the second density component.

Spaulding is not seen to add anything that, when combined with Takano and/or Cooper, would have resulted in the invention. In this regard, Spaulding is merely seen to disclose using a set of dither matrices for each of low and high density colorants. Spaulding is not, however, seen to disclose or to suggest anything that, when combined with Takano and/or Cooper, would have resulted in at least the features of controlling an error diffusion processing to execute, by a first processing unit/step, an error diffusion process to a first density component among a plurality of density components, and by a

second processing unit/step which requires a lighter processing load than the first processing unit/step, the error diffusion process to a second density component among the plurality of density components, wherein the first and second density components have respective different component types and wherein one dot (droplet) output based on the first density component has a lower density (smaller size) than one dot (droplet) output based on the second density component.

Kakutani is not seen to add anything that, when combined with Takano, Cooper and/or Spaulding, would have resulted in the invention. In this regard, Kakutani is merely seen to disclose a printer that prints dots of different densities. Kakutani is not, however, seen to disclose or to suggest anything that, when combined with Takano, Cooper and/or Spaulding, would have resulted in at least the features of controlling an error diffusion processing to execute, by a first processing unit/step, an error diffusion process to a first density component among a plurality of density components, and by a second processing unit/step which requires a lighter processing load than the first processing unit/step, the error diffusion process to a second density component among the plurality of density components, wherein the first and second density components have respective different component types and wherein one dot (droplet) output based on the first density component has a lower density (smaller size) than one dot (droplet) output based on the second density component.

In view of the foregoing amendments and remarks, independent Claims 1, 7, 13 and 25 to 27, as well as the claims dependent therefrom, are believed to be allowable.

No other matters having been raised, the entire application is believe to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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